CLAIMS

What is claimed is:

1.   A method for transmitting digital video over an analog interface comprising:

5   accessing digital video data having a number of bits per color per pixel;

        encoding said digital video data such that analog compatibility standards are

preserved and said bits per color per pixel are encoded to an amplitude level; and

        transmitting said encoded digital video data over an analog interface.

10   2.   The method as recited in Claim 1 further comprising:

        encoding six bits per color per pixel of said digital video data.

3.   The method as recited in Claim 1 further comprising:

        encoding a plurality of bits of said digital video data to one of eight available

15   amplitude levels.

4.   The method as recited in Claim 3 further comprising:

        encoding said plurality of bits of said digital video data to an amplitude level

between 0.0 volts and 0.7 volts.

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5.   The method as recited in Claim 1 further comprising:

        encoding said digital video data such that each pixel is represented by three bits

wherein each of said three bits are encoded to one of eight available levels of amplitude.

6. The method as recited in Claim 1 further comprising:

separating even bits and odd bits of said number of bits per color per pixel.

5 7. The method as recited in Claim 6 further comprising:

transmitting said even bits and said odd bits on successive cycles of a symbol-rate

clock.

8. The method as recited in Claim 6 further comprising:

10 transmitting said even bits and said odd bits over a New Analog Video Interface

(NAVI).

9. The method as recited in Claim 1 further comprising:

decoding said amplitude level to a brightness level compatible with a fixed-format

15 video display.

10. A system for transmitting digital video data over an analog video interface

comprising:

an input for receiving digital video data comprising a number of bits per color per

20 pixel;

a digital to analog video encoder coupled to said input for encoding said digital

video data such that analog compatibility standards are preserved and said bits per color

per pixel are encoded to an amplitude level; and

an output coupled to said digital to analog video encoder configured to communicatively couple to an analog video transmission line for transmitting said encoded digital video data.

5   11.   The system as recited in Claim 10 wherein said output is configured to communicatively couple to a New Analog Video Interface cable.

12.   The system as recited in Claim 11 wherein said output is configured to communicatively couple to a VGA adapter.

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13.   The system as recited in Claim 10 wherein said digital to analog video encoder encodes said bits per color per pixel to one of eight distinguishable amplitude levels.

14.   The system as recited in Claim 10 wherein said digital to analog video encoder

15   encodes three bits per said color per said pixel and wherein said three bits are encoded to an amplitude level between 0.0 volts and 0.7 volts.

15.   The system as recited in Claim 10 further comprising:

a multiplexer coupled to said digital to analog video encoder for separating said

20   bits per color per pixel into even and odd bits.

16.   The system as recited in Claim 15 further comprising:

a symbol-rate clock coupled to said output configured such that said even and said odd bits can be transmitted in successive clock cycle of said symbol-rate clock.

17. A method for encoding digital video data to an analog compatible format

5   comprising:

accessing a plurality of bits per color per pixel of digital video data;

encoding said bits per color per pixel to one of a plurality of available amplitude levels;

separating said plurality of bits per color per pixel into even bits and odd bits; and

10   transmitting said even bits and said odd bits in successive clock cycles of a symbol rate clock.

18. The method as recited in Claim 17 further comprising:

restricting said available amplitude levels to eight levels.

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19. The method as recited in Claim 18 further comprising:

encoding a first set of bits of said bits per color per pixel to one of said eight available amplitude levels and transmitting said encoded first set of bits of said bits per color per pixel.

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20. The method as recited in Claim 19 further comprising:

encoding a second set of bits of said bits per color per pixel to one of said eight

available amplitude levels and transmitting said encoded second set of bits of said bits per

color per pixel.

5   21.   The method as recited in Claim 17 further comprising:

transmitting said even bits and said odd bits over a New Analog Video Interface

(NAVI).

22.   The method as recited in Claim 17 further comprising:

10   decoding said amplitude level to a brightness level compatible with a fixed-format

video display.

23.   The method as recited in Claim 17 further comprising:

encoding said bits of said bits per color per pixel of said digital video data to an

15   amplitude level between 0.0 volts and 0.7 volts.

24.   An encoder for encoding digital video data to be transmitted over an analog

interface comprising:

an input for receiving digital video data comprising a number of bits per color per

20   pixel;

an encoder module coupled to said input for encoding said digital video data such

that analog compatibility standards are preserved and said bits per color per pixel are

encoded to an amplitude level; and

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an output coupled to said encoder module configured to communicatively couple

to an analog video transmission line for transmitting said encoded digital video data.

25. The encoder as recited in Claim 24 wherein said output is configured to

5   communicatively couple to a New Analog Video Interface cable.

26. The encoder as recited in Claim 25 wherein said output is configured to

communicatively couple to a VGA adapter.

10   27. The encoder as recited in Claim 24 wherein said encoder module encodes said

bits per color per pixel to one of eight distinguishable amplitude levels.

28. The encoder as recited in Claim 24 wherein said encoder module encodes three

bits per said color per said pixel and wherein said three bits are encoded to an amplitude

15   level between 0.0 volts and 0.7 volts.

29. The encoder as recited in Claim 24 further comprising:

a multiplexer coupled to said digital to encoder module for separating said bits per

color per pixel into even and odd bits.

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